



Europäisches Patentamt
European Patent Office
Offic européen des brevets



Publication number: **0 531 692 B1**

(12)

EUROPEAN PATENT SPECIFICATION

(43) Date of publication of patent specification: 07.06.95 (51) Int. Cl.⁸: A23G 3/30, A23L 1/236

(21) Application number: 92112937.5

(22) Date of filing: 29.07.92

(54) Chewing gum.

(30) Priority: 02.08.91 JP 194516/91

(43) Date of publication of application:
17.03.93 Bulletin 93/11

(45) Publication of the grant of the patent:
07.06.95 Bulletin 95/23

(64) Designated Contracting States:
AT BE CH DE DK ES FR GB GR IT LI LU MC
NL PT SE

(56) References cited:
EP-A- 0 067 595
EP-A- 0 343 776
EP-A- 0 351 566

(72) Proprietor: Kurihara, Yoshie
4-7, Okuzawa 7-chome
Setagaya-ku
Tokyo 125 (JP)

Proprietor: ASAHI DENKA KOGYO KABUSHIKI
KAISHA
2-35, Higashlogu 7-chome
Arakawa-ku
Tokyo 116 (JP)

(72) Inventor: Kurihara, Yoshie

7-4-7, Okuzawa,
Setagaya-ku
Tokyo (JP)
Inventor: Kohno, Hiroshige, c/o Asahi Denka
Kogyo K. K.
2-35, Higashlogu 7-chome,
Arakawa-ku
Tokyo (JP)
Inventor: Sugiyama, Hiromu, c/o Asahi Denka
Kogyo K. K.
2-35, Higashlogu 7-chome,
Arakawa-ku
Tokyo (JP)
Inventor: Shimada, Tetsu, c/o Asahi Denka
Kogyo K. K.
2-35, Higashlogu 7-chome,
Arakawa-ku
Tokyo (JP)
Inventor: Saito, Masako, c/o Asahi Denka
Kogyo K. K.
2-35, Higashlogu 7-chome,
Arakawa-ku
Tokyo (JP)
Inventor: Ikeda, Kenji, c/o Asahi Denka Kogyo
K. K.
2-35, Higashlogu 7-chome,
Arakawa-ku
Tokyo (JP)

Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid (Art. 99(1) European patent convention).

EP 0 531 692 B1

Ⓓ Representative: Patentanwälte Grünecker,
Kinkeldey, Stockmair & Partner
Maximilianstrass 58
D-80538 München (DE)

Description**Background of the Invention:**

5 [Field of the Invention]

This invention relates to a chewing gum capable of stably retaining its flavor and sweetness for a prolonged period of time.

10 [Description of the Prior Art]

In the case of a common chewing gum, which essentially consists of three components, namely, a gum base, sugars and flavors, the flavors and sweeteners are released within a short period of time after starting chewing. It is, therefore, difficult to retain the flavor and sweetness for a prolonged period of time.

15 On the other hand, the present inventors formerly developed a method for the application of Curculigo latifolia fruits, dried Curculigo latifolia fruits or a component containing curculin obtained therefrom to chewing gum (refer to Japanese Patent Laid-Open No. 84138/1990).

Summary of the Invention:

20

As described in the Japanese Patent Laid-Open No. 84138/1990, when Curculigo latifolia fruits, dried Curculigo latifolia fruits or a component containing curculin obtained therefrom is directly mixed with a gum base and other components by a known method, it is necessary to add a considerably large amount of the same in order to achieve detectable effects of enhancing and retaining the flavor and sweetness. This is because the main constituents of the Curculigo latifolia fruits, dried Curculigo latifolia fruits or component containing curculin obtained therefrom are incorporated into the gum base and, as a result, the effects of enhancing and retaining the flavor and sweetness would be masked by the gum base.

25

Accordingly, it is an object of the present invention to provide a chewing gum which can stably retain the flavor and sweetness for a prolonged period of time and exert a sweetness-modification effect on water or a sour substance taken after chewing the same.

30

In the present invention, the above-mentioned object has been achieved by providing a chewing gum which contains a coated material prepared by coating Curculigo latifolia fruits, processed Curculigo latifolia fruits or a component containing curculin obtained therefrom with a coating agent.

35

The chewing gum according to the present invention stably retains its flavor and sweetness for a prolonged period of time, exerts a sweetness-modification effect on water or a sour substance taken after chewing the same, and has a good texture at chewing.

Detailed Description of the Invention:

40

Now the chewing gum of the present invention will be described in greater detail.

The Curculigo latifolia fruits, processed Curculigo latifolia fruits or a component containing curculin obtained therefrom are as follows.

45

As the above-mentioned Curculigo latifolia fruits or processed Curculigo latifolia fruits, fresh Curculigo latifolia fruits and processed ones (for example, grinds of dried or frozen Curculigo latifolia fruits or Curculigo latifolia sarcocarp puree) may be cited. It is preferable to use Curculigo latifolia fruits free from peels and seeds, since no curculin is contained in peels or seeds.

In the present invention, the method for drying Curculigo latifolia fruits is not particularly restricted. It is recommended, however, to conduct drying in the shade, cold-drying, freeze-drying, vacuum drying or drying in a relatively low temperature range therefor.

50

In the present invention, the method for freezing the above-mentioned Curculigo latifolia fruits is not particularly restricted. As the method therefor, slow freezing, rapid freezing and self-freezing may be cited.

In the present invention, the method for grinding the above-mentioned Curculigo latifolia fruits is not particularly restricted. It is undesirable, however, to grind seeds distributed in the sarcocarp, since these seeds are rich in oily components.

55

An example of the component containing curculin obtained from Curculigo latifolia fruits or processed Curculigo latifolia fruits is a salt-extracted curculin, which may be further purified by, for example, desalting.

As the component containing curculin to be used in the present invention, the salt-extracted curculin may be used either as such or after being purified by, for example, desalting. Alternately, a preparation